Name and brief description of initiative:
Neuroimaging Informatics Technology Initiative (NIfTI)

Contact: Dr. Michael Huerta, NIH/NIMH mhuert1@mail.nih.gov

The Neuroimaging Informatics Technology Initiative (NIfTI) is supported by NIMH, NINDS, and NIBIB, and seeks to speed the development and enhance the utility of informatics tools in neuroimaging (http://nifti.nimh.nih.gov). In addition to grants funded under a request for applications several years ago, the major ongoing thrust of NIfTI has been conducted by the Data Format Working Group (DFWG).   The Working Group, which comprises experts who represent the major groups of domestic (including intramural NIH) and foreign developers of fMRI informatics tools, has as its charge to arrive at a technical solution to the multiple data format problem in fMRI. This problem was identified as a key impediment to progress in neuroimaging research several years ago, and the DFWG has been working on it since. Toward this end, the DFWG has developed and documented a simple data format, called NIfTI-1, and presented this at the annual international meeting of the Organization for Human Brain Mapping. Subsequently, NIfTI-1 has been adopted by, and incorporated in, five major software packages used in fMRI research (i.e., AFNI, FSL, Brainvoyager, SPM, and Freesurfer), as well as by other software tools and resources under development by large neuroimaging research groups. NIfTI-1 represents a common data format used by a wide range of neuroimaging laboratories.

Recently, the DFWG has started formulating strategies to define a complex data format. The issues are manifold, and have required the addition of several investigators expert in geometrical features (necessary for surface-based data, diffusion tensor imaging data, etc.). Several workshops have been held on this specific topic to date, and work continues.